



Weather

WEATHER SUPPORT

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OPR: 17 OWS/WXO (Capt Mary A. Owens)

Certified by: 17 OWS/CC
(Lt Col Mark D. Zettlemoyer)

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This instruction implements Air Force Policy Directive (AFPD) 15-1, *Atmospheric and Space Environmental Support*, Air Force Strategic Plan on Weather Reengineering (8 Aug 97), Air Force Instruction (AFI) 110-229, *Responding to Severe Weather Events*, AFI 15-114, *Weather Support Evaluation*, 15-118, *Requesting Specialized Weather Support*, Air Force Manual (AFMAN) 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, AFMAN 15-129, *Aerospace Weather Operations*, AFI 15-128, *Aerospace Weather Operations – Roles and Responsibilities*, and AFMAN 15-135, *Combat Weather Team Operations*. It establishes responsibilities and weather support procedures. It provides general information for weather services, including weather observations and forecasts; weather warnings, watches, and advisories; space weather supported services and dissemination of information and reciprocal support. It applies to units assigned to the 15th Air Base Wing (ABW) and subordinate units, and units assigned or attached to, or supported by Hickam AFB. This publication applies to the Air National Guard (ANG) and the Air Force Reserve Command (AFRC) and their units.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

The 17th Operational Weather Squadron (17 OWS) has assumed all weather support responsibility for the 15th ABW, subordinate units, and units assigned or attached to, or supported by Hickam AFB.

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Chapter 1

GENERAL INFORMATION

1.1. Concept of Operation. Weather support to the 15 ABW and units assigned, attached, or associated with the 15 ABW is provided by the 17th Operational Weather Squadron (17 OWS) at Hickam AFB, Hawaii. 17 OWS operates 24 hours a day, 7 days a week, 365 days a year. Weather services are provided for military, or military-related use only.

1.1.1. The 17 OWS provides meteorological and oceanographic products for DoD operations in the 13 AF AOR. The 17 OWS also produces specialized typhoon warning support for the DoD and DoS. Additionally, tailored operational weather products and staff support services for HQ PACAF, HQ USARPAC, the PACAF Operations Support Center (POSC), the Joint Air Operations Center (JAOC), 13 AF, 15 ABW and tenant units, 36 ABW, and transient aircrews are provided by the 17 OWS. Additionally, support to the 15 ABW includes weather support to a variety of Air Force activities throughout the state of Hawaii and Johnston Atoll.

1.1.2. Weather support for the 15 ABW is provided by the 17 OWS in a unique arrangement. The 17 OWS and 15 ABW have a memorandum of agreement that states the 17 OWS will provide all weather support to the 15 ABW and units assigned, attached, or associated with the 15 ABW. The 17 OWS designates one person to be a liaison between the 15 ABW and 17 OWS, to coordinate and arrange all weather support required by the 15 ABW and units assigned, attached, or associated with the 15 ABW. Additional 17 OWS personnel will assist the Liaison Officer in the performance of duties to support the 15 ABW, as required.

1.2. Duty Priorities.

1.2.1. Perform Emergency War Order (EWO) taskings.

1.2.2. Respond to aircraft/ground emergencies.

1.2.3. Execute OWS evacuation.

1.2.4. Provide products and services in support of combat operations, contingencies, and MOOTW operations.

1.2.5. Provide airborne aircrew support /respond to PMSV contacts.

1.2.6. Provide resource protection products (forecast weather watches, warnings, advisories, etc.).

1.2.7. SWAP operations.

1.2.8. Transmit PIREPs and AIREPs longline.

1.2.9. Prepare and disseminate peacetime/exercise regional and operational-level graphics and alphanumeric products.

1.2.10. Perform coordinated METWATCH support.

1.2.11. Prepare and disseminate Terminal Aerodrome Forecasts (TAFs).

1.2.12. Produce and disseminate Mission Execution Forecasts (MEFs).

- 1.2.13. Provide scheduled flight weather MEFs and tactical-level, non-contingency MEFs.
- 1.2.14. Provide other aerospace weather products, information, and weather briefings.
- 1.2.15. Accomplish other routine weather requirements.
- 1.2.16. Accomplish recurring training.
- 1.2.17. Accomplish administrative tasks.

1.3. Releasing Weather Information. 17 OWS will release weather information to the public only after prior coordination with 15 ABW Public Affairs (15 ABW/PA).

1.4. Operational Support Requirements.

1.4.1. Supported agencies will:

- 1.4.1.1. Establish and coordinate all weather support requirements and procedures with the 17 OWS.
- 1.4.1.2. Notify 17 OWS of any changes in support requirements.
- 1.4.1.3. Coordinate with 17 OWS for required weather training.

1.4.2. Unit commanders will:

- 1.4.2.1. Ensure they are informed of critical weather elements affecting their operations.
- 1.4.2.2. Ensure procedures are established within their organization to adequately respond to disseminated weather information.
- 1.4.2.3. Review this instruction at least annually for any changes in support requirements. Coordinate these changes with 17 OWS.

1.5. Back-Up Support.

- 1.5.1. In the event of an evacuation by the 17 OWS, weather support will be provided from the 17 OWS alternate site located at the Joint Typhoon Warning Center, Makalapa Compound, Pearl Harbor.
- 1.5.2. The phone number for the alternate location is 474-5300; the fax number is 474-2411.
- 1.5.3. A fax notification will be sent to the 15 ABW/CP and 735 AMS/AMCC when the 17 OWS evacuates.
- 1.5.4. Another fax will be sent to the 15 ABW/CP and 735 AMS/AMCC when the 17 OWS returns to their normal operations area.

Chapter 2

WEATHER OBSERVING

2.1. General. The Federal Aviation Administration (FAA) is responsible for weather observations at Hickam AFB/Honolulu International Airport 24-hours-a-day. They carry out this responsibility through a contract arrangement. The FAA's primary system is an Automated Surface Observing System (ASOS) to take METAR, SPECI, and local observations IAW Federal Meteorological Handbook 1, to include all published minimums listed in para. 2.2. There is only one ASOS at Honolulu. The primary sensor group is located near the approach of runway 08L. There is a backup sensor group consisting of ceiling and visibility only located near runway 04R. A certified, contracted observer augments the ASOS and provides backup when required. The National Weather Service (NWS) has responsibility for maintenance of the ASOS.

2.2. SPECI Observation Reporting Requirements. SPECI observations are taken to report significant changes in weather elements. The FAA's ASOS or contract observer takes, disseminates, and records a SPECI to report significant changes in weather elements when criteria, as indicated below, are observed.

2.2.1. **Ceiling.** The ceiling is observed to form below, decrease to less than or, if below, increase to equal or exceed 3,000 feet, 1,500 feet, 1,000 feet, 800 feet, 700 feet, 600 feet, 500 feet, 400 feet, 300 feet, or 200 feet.

2.2.2. **Sky Condition.** A layer of clouds or obscuring phenomena aloft is observed below 700 feet, and no layer aloft was reported below this height in the previous METAR or SPECI.

2.2.3. **Visibility.** Prevailing visibility is observed to decrease to less than or, if below, increase to equal or exceed 3 miles (4800 meters), 2 ½ miles (4000 meters), 2 miles (3200 meters), 1 ¾ miles (2800 meters), 1 ½ miles (2400 meters), 1 ¼ miles (2000 meters), 1 mile (1600 meters), ¾ mile (1200 meters), or ½ mile (800 meters).

2.2.4. **Tornado, Funnel Cloud, Waterspout:** Is observed or disappears from sight.

2.2.5. **Thunderstorm:** Begins (a SPECI is not required to report the beginning of a new thunderstorm if one is currently reported in progress at the station) or ends (15 minutes after last occurrence of criteria for a thunderstorm).

2.2.6. **Precipitation:**

2.2.6.1. Hail begins or ends.

2.2.6.2. Freezing precipitation begins, ends, or changes intensity.

2.2.6.3. Ice pellets begin, end, or change intensity.

2.2.6.4. Any type of precipitation begins or ends. (See paragraph 2.3.2.)

2.2.7. **Squall (SQ).** A strong wind characterized by a sudden onset in which the wind speed increases at least 16 knots and is sustained at 22 knots or more for at least one minute.

2.2.8. **Wind Shift.** The wind direction changes by 45 degrees or more in less than 15 minutes with sustained winds (or gusts) of 10 knots or more throughout the wind shift.

2.2.9. **Tower Visibility.** When either tower or prevailing surface visibility is less than 4 miles (6000 meters) and they differ by a reportable SPECI criteria value, a SPECI will be transmitted with the surface visibility value as the prevailing visibility and the tower visibility as a remark in the observation.

2.2.10. **Miscellaneous:**

2.2.10.1. Volcanic Ash. When first observed.

2.2.10.2. Any other meteorological situation that, in the opinion of the observer, is critical to the safety of aircraft operations.

2.3. Limitations:

2.3.1. The FAA does not provide Runway Visual Range (RVR) information on observations and does not take special observations for changes in RVR.

2.3.2. The ASOS does not have the capability to take a SPECI observation for a real-world nuclear accident as required in AFMAN 15-111.

2.4. Weather Radar. The NWS maintains four Weather Surveillance Radar – 88 Doppler (WSR-88D) Next Generation Radar (NEXRAD) systems across Hawaii. The primary radar antenna for Hickam AFB is located on the island of Molokai. The NWS provides weather radar data for Hickam AFB and the Hawaiian islands via a dedicated data feed. Additional antenna locations are on the islands of Kauai, Maui, and Hawaii. The four WSR-88Ds are under the operational control of the NWS.

Chapter 3

WEATHER FORECASTING

3.1. General. The NWS produces terminal forecasts through the Weather Forecast Office (WFO) Honolulu at the University of Hawaii, Manoa Campus. WFO Honolulu issues four forecasts daily under the International Civil Aviation Organization identifier PHNL.

3.2. Hickam AFB Forecast Services. 17 OWS issues a planning forecast for Hickam to apprise the local community of weather conditions expected at Hickam AFB. This forecast includes sky conditions, visibility, significant weather elements, winds, altimeter settings, temperatures, and hazards ([Attachment 4](#)). The planning forecast is issued once a day prior to 0500L, is available on the 17 OWS web site, and is not amended. Back-up dissemination method is via fax.

3.3. Local Flying Area Forecast Services. The 17 OWS issues an area forecast twice daily covering the Hawaiian Air Defense Identification Zone (ADIZ). This bulletin, the Hawaiian Air Defense Division (HADD) Bulletin, includes information on winds at various flight levels (surface through 50,000 ft), contrails, freezing level, tropopause height, maximum wind band, cloud layers, supersonic conditions, and ADIZ hazards ([Attachment 3](#)). The HADD bulletin is updated no later than 0600L and 1800L each day and is posted to the 17 OWS web site. The bulletin will not be amended. Additionally, a link to the local sea state conditions is available on the 17 OWS web site. Back-up dissemination method is via fax.

3.4. Haleakala Forecast. The 17 OWS makes weather products available for Mt. Haleakala, supporting Maui Space Surveillance Complex operations (Det 15, Air Force Research Lab and Det 3, 18th Space Surveillance Squadron). The products include information on mid and high level clouds, winds, precipitation, icing, temperature, vertical wind/temp/dew point profile, and pertinent tropical cyclone data ([Attachment 5](#)). The products will be available on the 17 OWS web site and be updated at least daily for a valid time of at least 48 hours. The Haleakala forecasts will not be amended. Back-up dissemination method is via fax.

3.5. Aviation Weather Support . The 17 OWS provides the following services to aircraft departing Hickam AFB:

3.5.1. Weather briefings. 17 OWS will provide Flight Weather Briefings (FWB) for all flights whose departing airfield is located in the 17 OWS AOR (attachment 9) unless another weather unit supports the airfield. FWBs are available via the web, e-mail, verbally, or via facsimile machine. Aircrews should notify the 17 OWS via the 17 OWS web site as soon as possible when this support is required and provide take-off time(s), destination(s), estimated time(s) of arrival, flight level(s), call sign(s) of aircraft, and request(s) for Distinguished Visitor packages. Aircrews may establish personal flight profiles on the 17 OWS web site for later use when requesting briefings

3.5.1.1. Aircrew should request and retrieve aircrew briefings via the 17 OWS web site by clicking on the New/Edit/Retrieve Aircrew Briefings link located in the quick links section of the 17 OWS home page and fill out the forms with the required information.

3.5.1.2. Instructions on how to fill out the request form can be found by clicking on the Aircrew Briefing Instruction located in the quick links section of the 17 OWS home page.

3.5.1.3. Information passed for a verbal weather briefing will be kept on a locally generated form.

3.5.2. Pilot-to-Metro Service (PMSV)/Air Reports (AIREPS) contact is available 24 hours a day on frequency 346.6 MHz and via Airways (use call sign Letterman). The 17 OWS solicits PIREPS and AIREPS from aircrews and transmits significant reports to other using agencies. AIREP forms (AF Form 72) are available to all aircrews departing Hickam and flying outside the local flying areas in the base operations flight planning room. These forms are completed enroute and debriefed at the destination weather station. The information is transmitted to Air Force Weather Agency to develop/update computer flight plans.

3.5.3. Flight and Route Metwatch. 17 OWS performs a route and flight metwatch for all flights departing Hickam AFB for which a flight weather briefing was given by the 17 OWS. In the event weather conditions change significantly enough (from those briefed at departure) to affect flight safety, the 17 OWS will make every attempt to contact the aircraft in flight by any means available.

3.6. Distinguished Visitor (DV) Packages . On request, 17 OWS will provide DV weather packages to include a horizontal weather depiction, a satellite image, and a plain language forecast for departure, enroute, and arrival weather. Aircrews requesting this service should provide as much advance notice as possible before departing Hickam AFB. Requests can be made in conjunction with a flight weather briefing request by typing in the request in the remarks section of the request page. DV packages can be sent via e-mail or printed in color in the flight service section of Base Operations.

3.7. Other Weather Support Services. The 17 OWS will provide any and all weather support to Hickam AFB and tenant units.

3.7.1. 17 OWS will prepare, as required, weather support annexes or appendices to 15 ABW plans or operations orders.

3.7.2. 17 OWS will provide or arrange for climatological data or studies as required.

3.7.3. The 17 OWS provides weather briefings to a number of customers on a scheduled and unscheduled basis. These briefings provide commanders, staff, and operations and aircrew personnel with valuable weather information for planning and decision-making. Wing staff, warning order, Battle Staff, Commander's Support Staff, flying safety, instrument refresher course, and seasonal briefings are provided routinely upon request.

3.8. Aircraft Accident/Incident Investigation. 17 OWS will arrange for a qualified weather officer to serve as the weather member of investigating boards IAW AFI 91-204 and 15 ABW OPLAN 91-1. In the case of a weather-related accident or incident (particularly at Hickam), 17 OWS should be notified as soon as possible to allow timely archival of weather data.

3.9. Fire Protection. 17 OWS will support controlled burning exercises, on request, with surface wind forecasts via telephone.

3.10. Toxic Corridor Calculations. Upon notification, 17 OWS will provide weather parameters to Bioenvironmental Engineering for enroute initial response toxic corridor calculations. The 17 OWS will then serve as a backup to the 15 CES/CEX "Weather Pak" for providing weather data. In the event of system failure, 17 OWS will provide "worst case" toxic corridor calculations.

Chapter 4

WEATHER WARNINGS, WEATHER WATCHES AND WEATHER ADVISORIES

4.1. General. Certain weather conditions can endanger property or life, pose a safety threat, or adversely affect a supported agency's operation. Via the meteorological watch (metwatch) program, 17 OWS monitors observations and forecasts for mission hampering weather conditions and advises support agencies when these conditions are observed or forecast. Weather warnings, watches, and advisories are the vehicles through which supported agencies are notified of these critical weather conditions. 17 OWS provides metwatch support to 15 ABW, Hawaii Air National Guard, US Army, and SPACECOM assets throughout the central Pacific.

4.2. Metwatch Concept. 17 OWS provides metwatch support to numerous installations. In an effort to overcome the lack of sensing instruments at each location and provide customers with the most accurate, timely information possible, the 17 OWS issues weather warnings, watches, and advisories for three locations that affect Hickam AFB units, tenants, or support agencies: Hickam AFB, the island of Oahu, and Johnston Atoll. All 17 OWS weather warnings, watches, and advisories will be available on the 17 OWS web site as shown in [Attachment 8](#).

4.2.1. Each weather notification type (Warning, Watch, and Advisory) will be numbered with the month of its occurrence followed by a number representing how many times that type of notification has been issued for that month. For example, Weather Warning 12-005 is the fifth weather warning issued during December. Each notification type will have its own number. For example, Weather Watch 11-001 and Weather Advisory 11-008 could be issued at the same time.

4.2.2. Cooperative Weather Watch Program. The Cooperative Weather Watch (CWW) program is a mechanism to leverage non-weather personnel in the identification and monitoring of potentially severe weather conditions and to enhance the 17 OWS metwatch program. Through an agreement with the 17 OWS, the Hickam Ramp Advisory will advise the 17 OWS of changing weather conditions based on a set of predetermined conditions. The combined effort of the 17 OWS and Hickam Ramp Advisory is vital to the enhanced protection of equipment and personnel at Hickam AFB.

4.3. Hickam AFB Weather Warnings. These products are issued when an established weather condition of such intensity as to pose a hazard to property or life is occurring or is expected to occur and for which the supported agency must take protective action. Weather warnings for Hickam AFB are issued for a 5 NM radius from the center of the runway at Honolulu International Airport. Warnings will not be issued when the specific location is in tropical cyclone COR1 (ref paragraph [4.10](#)). Weather warning criteria and appropriate desired lead times are in [Table 4.1](#).

Table 4.1. List of Hickam AFB Weather Warning Criteria and Desired Lead Times

CRITERIA	Desired Lead Time
Tornado/Funnel Cloud/Waterspout	30 minutes
Lightning/Thunderstorms within 5nm	As observed
Heavy Rain, 2" or greater in 4 hours	1 hour
Hail, ½" or greater	2 hours
Winds 35kts but less than 45kts	1 hour
Winds 45kts or greater	2 hours

4.3.1. Only one non-lightning warning for a particular location will be in effect at any given time; however, a warning may contain more than one warning criteria. Lightning warnings are independent. A lightning warning may exist while another warning for different criteria exists.

4.3.2. Warnings will not be issued when the specific location is in tropical cyclone COR1 (ref paragraph 4.10.).

4.4. Hickam AFB Weather Watches. Watches are special notices of forecast weather phenomena that alert supported agencies of the potential for mission impacting weather conditions. Weather watches are issued when the potential for severe weather is great enough to warrant concern, but not great enough to warrant a weather warning. Watches have longer valid times than warnings and allow alerted customers to “lean forward” in anticipation of a warning being issued. If weather conditions do favor severe weather, or if severe weather is imminent, the watch will be upgraded to a warning. Weather watches for Hickam AFB are issued for a 5 NM radius from the center of the runway at Honolulu International Airport. Watches will not be issued when the specific location is in tropical cyclone COR1 (ref paragraph 4.10.). Weather watch criteria and appropriate desired lead times are in [Table 4.2.](#)

Table 4.2. List of Hickam AFB Weather Watch Criteria and Desired Lead Times

CRITERIA	Desired Lead Time
Tornado/Funnel Cloud/Waterspout	Unlimited
Lightning/Thunderstorms within 5nm	30 minutes
Heavy Rain, 2" or greater in 4 hours	Unlimited
Hail, ½" or greater	4 hours
Winds 45kts or greater	4 hours

4.5. Hickam AFB Weather Advisories. A weather advisory is a special notice provided to a supported agency when an established weather condition that could affect its operation is occurring or is expected to occur. The 17 OWS issues terminal weather advisories for a 5 NM radius from the center of the runway at Honolulu International Airport and an area weather advisory for thunderstorms in the Hawaiian ADIZ. As defined in [Table 4.3.](#), some advisories are Forecast Weather Advisories (FWAs) and require lead-time notification, while others are Observed Weather Advisories (OWAs), meaning they are issued when conditions are observed.

Table 4.3. List of Hickam AFB Weather Advisory Criteria and Desired Lead Times

CRITERIA	Desired Lead Time
Thunderstorms in the ADIZ	As observed
Ceilings/Visibility less than 600'/2nm	As observed
Low level wind shear	As observed
Crosswinds, 25kts or greater, Runway 8R/26L	As observed
Surface wind 25 to 34kts	30 minutes

4.6. Oahu Weather Warnings. These products are issued when an established weather condition of such intensity as to pose a hazard to property or life is occurring or is expected to occur and for which the supported agency must take protective action. Warnings will not be issued when the specific location is in tropical cyclone COR1 (ref paragraph 4.10.).

4.6.1. Weather warnings for Oahu are issued for the Island of Oahu and support operations at the following locations:

4.6.1.1. Det 4, 22d Space Operations Squadron, Kaena Point Satellite Tracking Station

4.6.1.2. Det 5, 55th Space Weather Squadron/Palehua Solar Observatory.

4.6.1.3. Det 1, 15th Support Group, Bellows AFS.

4.6.1.4. Mt. Kaala AFS.

4.6.1.5. Naval Computer and Telecommunications Area Master Station, Wahiawa.

4.6.2. Oahu weather warning criteria and appropriate desired lead times are in [Table 4.4.](#)

Table 4.4. List of Oahu Weather Warning Criteria and Desired Lead Times

CRITERIA	Desired Lead Time
Tornado/Funnel Cloud/Waterspout	30 minutes
Lightning/Thunderstorms within 5nm	As observed
Heavy Rain, 2" or greater in 4 hours	1 hour
Hail, 1/2" or greater	2 hours
Winds 45kts or greater	2 hours

4.7. Oahu Weather Watches. Oahu watches are special notices of forecast weather phenomena that alert supported agencies of the potential for mission impacting weather conditions. Weather watches are issued when the potential for severe weather is great enough to warrant concern but not great enough to warrant a weather warning. Watches have longer valid times than warnings and allow alerted customers to “lean forward” in anticipation of a warning being issued. If weather conditions do favor severe weather, or if severe weather is imminent, the watch will be upgraded to a warning. Watches will not be issued when the specific location is in tropical cyclone COR1 (ref paragraph 4.10.).

4.7.1. Weather watches for Oahu are issued for the Island of Oahu and supports operations at the following locations:

- 4.7.1.1. Det 4, 22d Space Operations Squadron, Kaena Point Satellite Tracking Station.
 - 4.7.1.2. Det 5, 55th Space Weather Squadron/Palehua Solar Observatory.
 - 4.7.1.3. Det 1, 15th Support Group, Bellows AFS.
 - 4.7.1.4. Mt. Kaala AFS.
 - 4.7.1.5. Naval Computer and Telecommunications Area Master Station, Wahiawa.
- 4.7.2. Oahu weather watch criteria and appropriate desired lead times are in [Table 4.5](#).

Table 4.5. List of Oahu Weather Watch Criteria and Desired Lead Times

CRITERIA	Desired Lead Time
Tornado/Funnel Cloud/Waterspout	Unlimited
Lightning/Thunderstorms within 5nm	30 minutes
Heavy Rain, 2" or greater in 4 hours	Unlimited
Hail, 1/2" or greater	4 hours
Winds 45kts or greater	4 hours

4.8. Johnston Atoll Weather Warnings. Johnston Atoll warnings are issued when an established weather condition of such intensity as to pose a hazard to property or life is occurring or is expected to occur and for which the supported agency must take protective action. Weather warnings for Johnston Atoll are issued for a 5 NM radius from the center of the runway. Johnston Atoll weather warnings will not be issued when the specific location is in tropical cyclone COR1 (ref paragraph [4.10](#)). Weather warning criteria and appropriate desired lead times are in [Table 4.6](#).

Table 4.6. List of Johnston Atoll Weather Warning Criteria and Desired Lead Times

CRITERIA	Desired Lead Time
Heavy Rain, 2" or greater in 4 hours	Unlimited
Winds 35kts but less than 45kts	1 hour

4.9. Significant Turbulence Bulletin. This bulletin is designed to inform the flying community of severe turbulence, surface to 10,000 feet, at Hickam AFB.

- 4.9.1. The Significant Turbulence Bulletin is issued when one or more of the following conditions exist.
 - 4.9.1.1. Moderate to severe or greater turbulence, surface to 10,000 feet, is occurring or is expected to occur within a 5 NM radius of the runway complex and could affect Category 2 aircraft. This is based on an actual report or a 17 OWS forecast. Issuance is not based on NWS forecast or SIGMET.
 - 4.9.1.2. In the event the 17 OWS disagrees with a NWS SIGMET for moderate or greater turbulence, the forecaster will brief the SIGMET to aircrews along with an explanation for the disagreement.
- 4.9.2. The Significant Turbulence Bulletin is disseminated longline and is valid until further notice. The bulletin will be reissued every six hours until the bulletin is no longer valid. At that time, a bulle-

tin will be issued stating the potential for significant turbulence has diminished. See [Attachment 2](#) for an example of the bulletin.

4.10. Hurricane Support . Hickam AFB Tropical Cyclone Conditions of Readiness (COR). 17 OWS will interpret warnings from the Central Pacific Hurricane Center (CPHC) and other data and, together with the Chief of Disaster Preparedness, will advise the 15 ABW/CC regarding the implementation of the COR when a tropical cyclone threatens Hickam AFB or Johnston Island. Preparatory actions to be taken during these CORs are set in 15 ABW OPLAN 32-4001, Tropical Cyclone Protection/Evacuation of Aircraft, and 15 ABW OPLAN 32-1, Disaster Preparedness Operations Plan. The CORs are as follows:

- 4.10.1. COR 4. Destructive winds of 50 knots or greater are possible within 72 hours.
- 4.10.2. COR 3. Destructive winds of 50 knots or greater are possible within 48 hours.
- 4.10.3. COR 2. Destructive winds of 50 knots or greater are anticipated within 24 hours.
- 4.10.4. COR 1. Destructive winds of 50 knots or greater are occurring or anticipated within 12 hours.
- 4.10.5. COR 0. A Hickam AFB-unique condition of readiness used while destructive winds of 50 knots or greater are occurring until the all clear is given. COR 0 drives the wing into a posture where only mission essential personnel are on duty and or standing by for recovery operations.

4.11. Wind Forecasts . 17 OWS will issue wind forecasts for Hickam AFB according to PACAFI 15-101 when tropical storms are threatening Hickam AFB or Johnston Atoll. The bulletin header for these forecasts will be WDPN PHIK.

Chapter 5

DISSEMINATION OF WEATHER INFORMATION

5.1. General. 17 OWS will assist supported agencies in maintaining an efficient, effective means of disseminating weather support information. Weather dissemination procedures must ensure that customers receive the required information. Procedures developed to this end must ensure weather personnel do not spend more time communicating than monitoring weather conditions. All units receiving weather support must be involved in a continuous program of evaluation and improvement of the weather dissemination system, including inter-unit dissemination. The 17 OWS places all its forecasts and products on its web site located at <https://17ows.hickam.af.mil/>. The primary dissemination procedure for all 17 OWS products except weather warning, watches, and advisories is via the web, while back-up dissemination is via fax.

5.2. Weather warnings, watches, and advisories.

5.2.1. The primary means of disseminating warnings, watches, and advisories (WWWA) is via phone, and all WWWA will be available on the 17 OWS web site. The back-up dissemination method is via fax.

5.2.2. All warnings, watches, and advisories will be disseminated to the organizations as shown in **Attachment 8**.

5.2.3. If the 17 OWS web site does not work all warnings, watches, and advisories will be faxed to the primary customers in the first row of **Attachment 7**.

Chapter 6

SPACE WEATHER SUPPORT AND SERVICE

6.1. General. Any unit requiring space weather support should contact the 17 OWS at 449-8335 and coordinate their support requirements.

Chapter 7

SPECIAL MISSION REQUIREMENTS

7.1. General. The previous chapters covered support requirements for the majority of the operations on Hickam AFB. Information on units requiring unique support is outlined in this chapter. Any special support requirements not covered here should be coordinated with 17 OWS.

7.2. 15 ABW Command Post (15 ABW/CP). 17 OWS will:

- 7.2.1. Provide forecasts, as required, for all terminals of interest to 15 ABW/CP.
- 7.2.2. Assist in developing procedures to disseminate weather warnings, watches, and advisories.
- 7.2.3. Immediately notify 15 ABW/CP of all severe PIREPs in the local area or along major routes.

7.3. 735th Air Mobility Squadron (735 AMS). 17 OWS will:

- 7.3.1. Assist in developing procedures to disseminate weather warnings, watches, and advisories.
- 7.3.2. Provide copies of 17 OWS Aircrew Weather Instructions for AMC Transient Aircrews flyers.

7.4. 15th Communications Squadron Maintenance Control (15 CS). 17 OWS will:

- 7.4.1. Notify 15 CS Job Control of outages at DSN 449-4878, which involve 17 OWS assigned equipment maintained by 15 CS. The following information will be provided: date and time equipment is logged out, description of equipment problem, type of outage (i.e., significant, minimal), date and time equipment is satisfactorily restored.
- 7.4.2. Notify Hickam Tech Control for circuit outages involving 17 OWS circuits.

7.5. 15th Operations Support Squadron (15 OSS). 17 OWS will provide initial/refresher weather orientation and or cooperative weather watch program training for flight services and Hickam Ramp Advisory Tower personnel, as required.

7.6. Disaster Preparedness (15 CES/CEX). 17 OWS will:

- 7.6.1. Together with the Disaster Preparedness Chief, advise the 15 ABW Commander regarding establishment of the appropriate tropical cyclone COR for Hickam AFB, Bellows Air Force Station (AFS), and Johnston Island. Tropical cyclone CORs for Hickam AFB and Bellows AFS are set by 15 ABW/CC.
- 7.6.2. Coordinate with 15 CES/CEX and 15 ABW/PA on disseminating tropical cyclone information to the base populace via cable TV or other means.
- 7.6.3. Provide weather support for natural disasters and wartime operations, including fallout prediction data.
- 7.6.4. Provide initial weather parameters to calculate the toxic corridor. The forecaster will fill out the "Weather Data for Input into AFTOX" ([Attachment 6](#)) worksheet when notified the Disaster Control Group (DCG) is forming. When required, the forecaster will read pertinent data over the telephone to an on-site DCG member.

7.6.5. Serve as a backup to the weather sensing equipment onboard the 15 ABW Mobile Command Post. In the event of equipment failure, provide the DCG with the most recent data from the Honolulu International Airport observation.

7.6.6. In the event of system failure provide a worst-case toxic corridor calculation using the "Worst Case Toxic Corridor Worksheet." ([Attachment 6](#))

7.7. 15 ABW Staff Judge Advocate (15 ABW/JA). 17 OWS will provide weather inputs for weather damage claims, upon request.

7.8. 154 WG (HIANG). 17 OWS will:

7.8.1. Provide training, in person or through training packages, to HIANG air traffic control personnel on taking limited weather observations, as required.

7.8.2. Provide aircrew and Battle Staff weather briefings during HIANG exercises, as requested.

7.8.3. Provide flight weather briefings as required for all flights.

7.8.4. Provide 169 ACWS Battle Staff and Weapons crews weather briefings during HIANG exercises, as requested.

7.9. HQ Air Combat Command Air Operations Squadron, Fighter Operations Flight, (HQ ACC AOS/DET 2). 17 OWS will:

7.9.1. Provide Out-of-Station (OOS) briefings for all missions originating from Hickam AFB with five or more total aircraft (including tankers). OOS briefings will be at the Tanker Task Force briefing room or another pre-coordinated location.

7.9.2. For all briefings other than OOS, provide the Delivery Control Officer (DCO) with the weather briefing via the 17 OWS web site, e-mail, or facsimile machine. If an aircrew member or DCO has any questions or concerns, he or she may contact the 17 OWS weather forecaster directly at 449-8333.

7.9.3. Include the following briefing information for all briefings: flight weather briefing form that includes: take-off data and destination(s)/alternates terminal forecasts, local and enroute satellite imagery, sea surface temperatures, flight level winds/temperatures with aerial refueling (AR) tracks indicated, Horizontal Weather Depiction (HWD)/significant weather, Mission Control Forecast (when available), ditch headings, and any other meteorological/oceanographic data upon request.

7.9.4. Provide metwatch for the duration of the mission if 17 OWS originally briefed the DCO. The forecaster will notify the DCO and POSC Senior Director when crosswinds greater than 25 knots occur or when ceilings or visibility fall below 500 feet or 1/2 mile, respectively (or if these conditions are forecast to occur).

7.9.5. Provide briefings via facsimile machine for CORONET WEST missions departing locations without weather support and arriving at Hickam AFB.

7.10. 65th Airlift Squadron (65 AS). 17 OWS will:

7.10.1. Provide flight weather briefings for all flights departing Hickam AFB and within the 17 OWS area of responsibility ([Attachment 9](#)).

7.10.2. Provide Distinguished Visitor (DV) packages to include horizontal weather depiction and plain language data for departure, enroute, and arrival weather.

7.10.3. Perform a route and flight metwatch for all flights departing Hickam and for flights briefed by 17 OWS. In the event weather conditions which affect flight safety change significantly from those briefed at departure, the 17 OWS will make every attempt to contact the aircraft in flight through the 15 ABW Command Post.

7.10.4. Provide instructors for the weather portion of the Instrument Refresher Course (IRC)/safety briefings upon request.

7.10.5. For missions to non-US installations, 65 AS Mission Commanders will coordinate with 17 OSW to have weather packages faxed to the crew hotel at a pre-arranged time. If the Mission Commander is confident in Internet capability at the hotel, he/she may opt to rely on this method of weather package transmission.

7.11. Det 5, 55th Space Weather Squadron/Palehua Solar Observatory (Det 5, 55 SWXS). 17 OWS will provide Det 5, 55 SWXS personnel an area to work should they evacuate their location to include 24-hour access to a secure phone system.

7.12. National Airborne Operations Center (NAOC). The 17 OWS will provide support to the NAOC aircraft in accordance with 15 ABW OPLAN 410.

7.13. Open Skies. 17 OWS will provide support to the Open Skies Inspection Agency (OSIA) according to 15 ABW Open Skies Compliance Plan, Annex 4, during OSIA visits to Hickam AFB.

7.14. Space Shuttle. The 17 OWS will provide support to the Space Shuttle program in accordance with 15 ABW OPLAN 409.

Chapter 8

RECIPROCAL SUPPORT

8.1. General. The 17 OWS requires reciprocal support from various base agencies, particularly where the required support is beyond 17 OWS capabilities. The support requirements outlined herein are essential to 17 OWS providing timely, accurate weather support to Hickam AFB.

8.2. 15 ABW/CP. 15 ABW/CP will:

- 8.2.1. Disseminate weather watches, warnings, and advisories via the ENS IAW 15 ABWI 10-203.
- 8.2.2. Notify aircraft of any significant weather phenomena relayed from the 17 OWS. These would include terminal or area weather advisories, weather watches, weather warnings, and SIGMETs issued by the NWS.
- 8.2.3. Notify the 17 OWS of departure changes as soon as possible. The update should include changes to departure times, routes, altitudes, destinations, missions, and/or aircraft tail numbers.
- 8.2.4. Relay amended forecasts to aircraft when requested by the 17 OWS.
- 8.2.5. Ensure the 17 OWS is promptly notified of all alerts, exercises, and FPCON changes, and any other urgent situations under 15 ABWI 10-203 and/or aircraft evacuations under 15 ABW OPLAN 32-4001.
- 8.2.6. Encourage aircrews to provide PIREPs and AIREPs.

8.3. 735 AMS. 735 AMS will:

- 8.3.1. Request flight weather briefings (FWB) via the 17 OWS web site for all non-local AMC missions departing Hickam AFB. Notify the 17 OWS of changes to departures as soon as possible.
- 8.3.2. Provide copies of CFPs to the 17 OWS.
- 8.3.3. Encourage aircrews to provide PIREPs and AIREPs.
- 8.3.4. Give all aircrews a copy of the 17 OWS weather instructions flyer.

8.4. 15 CS. 15 CS will:

- 8.4.1. Maintain and arrange for maintenance of all assigned meteorological equipment, not including systems designated as operator maintained.
- 8.4.2. Notify the 17 OWS as soon as an equipment outage has terminated. Include the Date Time Group (DTG) the equipment was logged in (i.e., the job was closed).
- 8.4.3. Operate and maintain the Defense Meteorological Satellite Program (DMSP) Direct Read Out Site 7 located on Hickam AFB.
- 8.4.4. Maintain a priority listing for restoration of weather equipment. This list will be coordinated between 17 OWS and 15 CS. The 17 OWS may alter this precedence with coordination from 15 CS if the meteorological situation warrants.
- 8.4.5. Log out malfunctioning equipment during MARK IVB Meteorological Data Station outages.

8.4.6. Notify the 17 OWS if a MARK IVB outage of any kind has occurred or is scheduled to occur. Whenever possible, the 15 CS will provide a minimum 24 hour advance notice of planned outages.

8.4.7. Provide access to weather equipment technical orders.

8.4.8. Coordinate all scheduled maintenance on equipment. If weather conditions dictate caution, weather equipment will not be taken down for scheduled maintenance.

8.4.9. Notify the 17 OWS when any outages to the NIPRNET or other systems potentially affecting 17 OWS operations are planned, and of any unplanned outages that occur.

8.5. 15 OSS/OSA. 15 OSS/OSA will:

8.5.1. Upon request, provide a radio check of PMSV frequency (346.6 MHz) through the Hickam Ramp Advisory Tower.

8.5.2. Update Flight Information Publications (FLIPs) upon request.

8.5.3. Upon receipt or determination, pass initial runway surface condition information and any changes to the 17 OWS.

8.5.4. Report any sighting of lightning, waterspouts, or hail (cooperative weather watch) to the 17 OWS.

8.5.5. Notify the 17 OWS via Secondary Crash Net of any aircraft emergencies or accidents.

8.5.6. Maintain the ability for aircrews to access the 17 OWS website and print out flight weather briefings.

8.6. 15 CES/CEX. 15CES/CEX will:

8.6.1. Provide on-scene weather data using output from Weather Pak for Toxic Corridor calculations.

8.6.2. Notify 17 OWS immediately upon Weather Pak equipment failure.

8.7. Bioenvironmental Engineering (15 ADS/SGGB). 15 ADS/SGGB will:

8.7.1. Obtain initial response weather data for AFTOX from 17 OWS by calling 449-8332 and asking the forecaster for the temperature (Fahrenheit), wind direction, wind speed (knots), cloud cover (in eights) below 12,000 feet, and if there is a temperature inversion present below 2,000 feet.

8.7.2. Assume primary responsibility for calculating and plotting toxic corridors for the on-scene commander and Commander's Support Staff (CSS).

8.8. 65AS. The 65 AS will:

8.8.1. Request flight weather briefings via the 17 OWS web site. If a DV package is required, enter the request in the remarks section of the weather request form.

8.8.2. Submit AIREPs /PIREPs during flights on UHF 346.6 or airways, or during a weather debrief after the flight.

8.8.3. Provide 17 OWS the 65 AS 90-day Flying Schedule when updated.

8.8.4. Provide the 17 OWS the weekly 65 AS sortie slide for the 15 ABW weekly staff meeting when updated.

8.9. 154 WG (HIANG). The HIANG will:

- 8.9.1. Request flight weather briefings via the 17 OWS website. If a DV package is required enter the request in the remarks section of the weather request form.
- 8.9.2. Submit AIREPS/PIREPS during the flight or weather debrief after the flight.
- 8.9.3. Notify 17 OWS or 199 Weather Flight (HIANG) prior to upcoming exercises requiring weather support. The notification will include: meteorological data needed as well as the dates, times, and location of all required weather briefings.
- 8.9.4. Incorporate weather support requirements outlined in this instruction into HIANG /15ABW support agreements.

8.10. HQ ACC AOS/DET 2. HQ ACC/AOS Det 2 will:

- 8.10.1. Provide 17 OWS with a setup sheet or enter the weather request via the 17 OWS web site NLT 24 hours prior to the scheduled takeoff time for all departures in the 17 OWS area of responsibility (**Attachment 9**). Every effort will be made to coordinate with 17 OWS as soon as mission schedules are determined. The setup sheet will include the following: type of briefing requested, number and type of aircraft (to include tankers), call signs of aircraft (to include tankers), date, time, and location of takeoff, destination(s) and alternates and respective valid times for aircraft (to include tankers), mission number, a point of contact from HQ ACC AOS (i.e., the DCO), required number of aircrew weather packages, and A/R track and altitude if ACC does not provide Mission Control Forecast.
- 8.10.2. Notify the 17 OWS if any significant mission changes occur. Significant mission changes include cancellations, changes to date/time of takeoff, and changes to the type of briefing requested. In the event a mission is cancelled, contact the 17 OWS immediately to prevent unnecessary route metwatch.
- 8.10.3. Coordinate any variations to the above listed procedures or any special requests for support.
- 8.10.4. Provide 17 OWS the long-range mission schedule when updated.

8.11. Det 5, 55th SWXS. Det 5, 55 SWXS will:

- 8.11.1. Call the 17 OWS only for those messages Det 5 deems necessary for real-time transmission.
- 8.11.2. Provide 17 OWS with verification information on all weather warnings and advisories issued for Oahu.

8.12. Maui Space Surveillance Complex (MSSC). MSSC will notify the 17 OWS when moderate/heavy rainfall, snowfall, or strong winds are occurring at the site.**8.13. Det 4, 22d Space Operations Squadron, Kaena Point Satellite Tracking Station.** Det 4, 22 SOPS will:

- 8.13.1. Notify the 17 OWS when the wind speeds reach 35kts and 45kts on the inner-most sensor.

8.13.2. Provide outer wind sensor readings to 17 OWS for informational purposes.

MICHAEL A.FLECK, Lt Col, USAF
Commander, 15th Operations Group

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

FCM-P12, National Hurricane Operations Plan

DoD Flight Information Publications (FLIPs)

AFI 11-206, General Flight Rules

PACAFI 15-101, Weather Support for Pacific Air Forces (PACAF)

PACAFI 15-102, Tropical Cyclone Reconnaissance

15 ABWI 10-203, Commander's Staff and Telephone Alert Conference Network (TACNET) Operations Procedures

15 ABW Operations Plan (OPLAN) 32-4001, Tropical Cyclone Protection/Evacuation of Aircraft

15 ABW OPLAN 32-1, Disaster Preparedness Operations Plan

AFMAN 15-129, Aerospace Weather Operations

AFMAN 15-135, Combat Weather Team Operations

Abbreviations and Acronyms

ADIZ—Air Defense Identification Zone

FPCON—Force Protection Condition

FS—Fighter Squadron

HADD—Hawaiian Air Defense Division

HIANG—Hawaii Air National Guard

IAP—International Airport

IRC—Instrument Refresher Course

JTWC—Joint Typhoon Warning Center

Metwatch—Meteorological Watch

NAOC—National Airborne Operations Center

NOTAM—Notice to Airmen

NWSFO—National Weather Service Forecast Office

OPLAN—Operations Plan

OSIA—Open Skies Inspection Agency

OSS—Operations Support Squadron

OWS—Operational Weather Squadron

PACAF—Pacific Air Forces

PTWC—Pacific Tsunami Warning Center

PIREP—Pilot Report

PMSV—Pilot to Metro Service

SPSS—Space Surveillance Squadron

SG—Space Group

SIGMET—Significant Weather Message

SWO—Staff Weather Officer

TAF—Terminal Aerodrome Forecast

TACNET—Telephone Alert Conference Network

UFN—Until Further Notice

WDPN—Wind bulletin for areas affected by tropical storms

Terms

AFTOX—An Air Force software program designed to calculate toxic corridors based on a number of spill-specific characteristics and weather conditions

Air Report (AIREP)—A pilot report made over areas where weather information is limited or nonexistent.

Desired Lead Time (DLT)—The amount of advance notice a supported agency needs to react to an advisory or warning.

Longline—The process of transmitting weather data over the Automated Weather Network (AWN) for access by worldwide weather users.

Meteorological Watch (Metwatch)—The process of monitoring observed and forecast weather conditions and informing supported agencies when certain established weather conditions which could affect their operations are occurring or are expected to occur. There are four types of metwatch.

Area Metwatch—A metwatch conducted for local flying areas (i.e., Hawaiian Air Defense Identification Zone (ADIZ), exercise flying area, etc.).

Flight Metwatch—A metwatch conducted for a specific flight or mission.

Route Metwatch—A metwatch conducted for a specific route (e.g., refueling tracks, training routes provided by special request or direction, etc.).

Terminal Metwatch—A metwatch conducted within a 5nm radius of the station for airfield runways, taxiways, and ramp areas.

Toxic Corridor—An area derived from spill characteristics and environmental conditions deemed to be susceptible to toxic contamination.

Pilot Report (PIREP)—A report of in-flight weather made by an aircrew member.

Tropical Cyclone Condition of Readiness (COR)—A formal state or readiness declared by an

installation commander, which keys time-phased protective actions to minimize damage and injuries.

Weather Advisory—A special notice provided to a supported agency when an established weather condition that could affect its operation is occurring or is expected to occur.

Weather Pak—A deployable set of instrumentation capable of calculating on-scene temperature, wind direction, and wind speed.

Weather Warning—A special forecast provided to a supported agency when an established weather condition of such intensity as to pose a hazard to property or life is occurring or is expected to occur and for which the supported agency must take protective action.

Weather Watch—A special notice of forecast weather phenomena that alerts supported agencies of the potential for mission impacting weather conditions. Weather watches are issued when the potential for severe weather is great enough to warrant concern but not great enough to warrant a weather warning. Watches have longer valid times than warnings and allow alerted customers to “lean forward” in anticipation of a warning being issued.

Attachment 2**SIGNIFICANT TURBULENCE BULLETIN EXAMPLE**

WSTB PHIK 150000

SIGNIFICANT TURBULENCE BULLETIN FOR HICKAM AFB, HAWAII
VALID: UNTIL FURTHER NOTICE

SIGNIFICANT TURBULENCE

TURBULENCE – MODERATE TO SEVERE TURBULENCE FORECASTED FROM HICKAM AFB
SURFACE – 6,000 FEET.

THIS MECHANICAL TURBULENCE IS BEING CAUSED BY STRONG LOW-LEVEL WINDS
BLOWING ACROSS THE MOUNTAINS OF OAHU.

SEVERAL PIREPS FROM CATEGORY 1 AND CATEGORY 2 AIRCRAFT HAVE BEEN RECEIVED
REPORTING MODERATE – SEVERE TURBULENCE.

THIS BULLETIN IS VALID UNTIL FURTHER NOTICE. IT WILL BE ISSUED EVERY 6 HOURS
UNTIL SIGNIFICANT TURBULENCE CONDITIONS NO LONGER EXIST (AT WHICH TIME
THIS BULLETIN WILL BE CANCELED). IF YOU HAVE QUESTIONS, CALL THE 17 OWS AT
DSN: 449-8332.

THE NEXT BULLETIN WILL BE ISSUED AT 15/0600Z.

Attachment 3

HAWAIIAN AIR DEFENSE DIVISION FORECAST (HADD) EXAMPLE

HAWAIIAN AREA DEFENSE DIVISION FORECAST							
ADIZ FORECAST			VALID:		11 DEC 17Z TO 12 DEC 05Z 2001		
THE HADD FORECAST IS NOT AMENDED AND IS FOR PLANNING PURPOSES ONLY. IT IS NOT TO BE USED IN PLACE OF A FLIGHT WEATHER BRIEFING. PLEASE CALL 170WS AT 449-8333 FOR A FLIGHT WEATHER BRIEFING.							
ALTITUDE IN HUNDREDS OF FEET MEAN SEA LEVEL (MSL), UNLESS OTHERWISE SPECIFIED. WIND DATA DDVVV WHERE: DD IS WIND DIRECTION IN TENS OF DEGREES AND VVV IS SPEED IN KNOTS. TEMPERATURE IS IN DEGREES CELCIUS.							
	24N 159W		21N 159W		18N 159W		
FLIGHT LEVEL	WIND	TEMP	WIND	TEMP	WIND	TEMP	TEMP DEV
050	11020	12	10020	13	09020	14	8
100	08015	5	07015	6	06015	6	11
150	02020	-4	02025	-3	01020	-2	12
200	36035	-14	36035	-13	35035	-13	11
250	35045	-25	35050	-24	35050	-23	11
300	34055	-35	34065	-34	34060	-32	10
350	34065	-44	34085	-43	33065	-42	11
400	33065	-53	33080	-53	33055	-53	3
450	33060	-62	33055	-63	33050	-64	-7
500	34050	-70	34040	-70	34035	-72	-14
CONTRAILS	44/67		44/67		43/61		
TROP HEIGHT	ABV 530		ABV 530		ABV 530		
MAX WIND/LEVEL	34080	380	340100	370	33075	370	
SUPERSONIC CONDITIONS				CLOUDS			
AS OF 11/00Z							
NORTH	BAD	SOUTH	BAD	COVERAGE	LEVELS		
				SCT-BKN	020-060		
				SCT-BKN	250-300		
SEAS/STATE							
ADIZ HAZARDS/REMARKS							

Attachment 4

HICKAM AFB PLANNING FORECAST EXAMPLE

https://17ows.hickam.af.mil/ows_unique/17/floor_products/PHIK_planning_forecast.htm - Microsoft Internet Explorer

HICKAM AFB PLANNING FORECAST					11-Dec-01
	TIME		SKY CONDITION	VISIBILITY & WEATHER	
FCST	13-13Z	06015KT	FEW030 SCT050	9999 VCSH	
TEMPO	13-19Z	06015G22KT	BKN030 BKN050	9999 -SHRA	
BECMG	18-19Z	06015G27KT	SCT030 BKN050	9999 VCSH	
TEMPO	19-05Z		BKN030 BKN050	9999 -SHRA	

HAZARDS: [Click for Current Warnings, Watches, and Advisories](#)

SFC WNDS GUSTING 25-34KTS AFT 19Z

LGT-MDT TURB SFC-060 AFT 19Z

SUNRISE: 11/0659L	Min ALSTG: 29.95	Max Temp: 28 C 82 F
SUNSET: 11/1751L	Max PA: -17	Min Temp: 22 C 72 F

REMARKS: [Click for Forecasted Hickam AFB Take-off Data](#)

THIS FORECAST IS NOT AMENDED AND IS FOR PLANNING PURPOSES ONLY. IT IS NOT TO BE USED IN PLACE OF A FLIGHT WEATHER BRIEFING. PLEASE CLICK BELOW FOR A FLIGHT WEATHER BRIEFING.

[Request a Flight Weather Briefing](#)

Attachment 5

HALEAKALA FORECAST EXAMPLE

MSSC

AFWA Forecast Meteogram
MM5 Model Cycle: 11DEC2001 00Z

45km
Resolution

Stn Information
Lat:20.7
Lon:-156.25
Elev:380ft

Relative Humidity (>70%)
Clouds
Temperature (C)
Wind Barbs (kts)

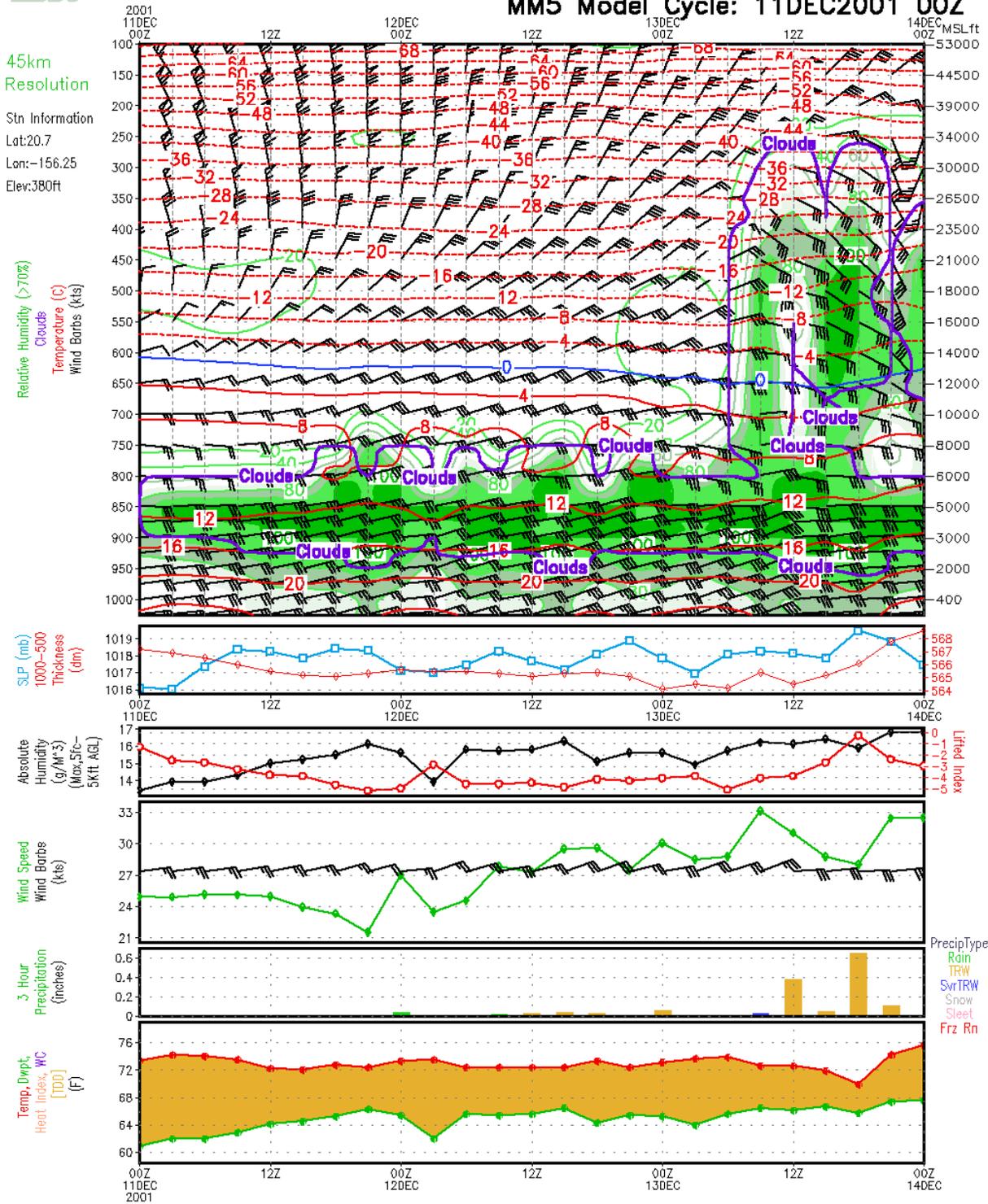
SLP (mb)
1000-500
Thickness (dm)

Absolute Humidity (g/M³)
(Max,Stc-5Kft_AGL)

Wind Speed
Wind Barbs (kts)

3 Hour
Precipitation (inches)

Temp_Dwpt
Heat Index, WC [TDP] (F)

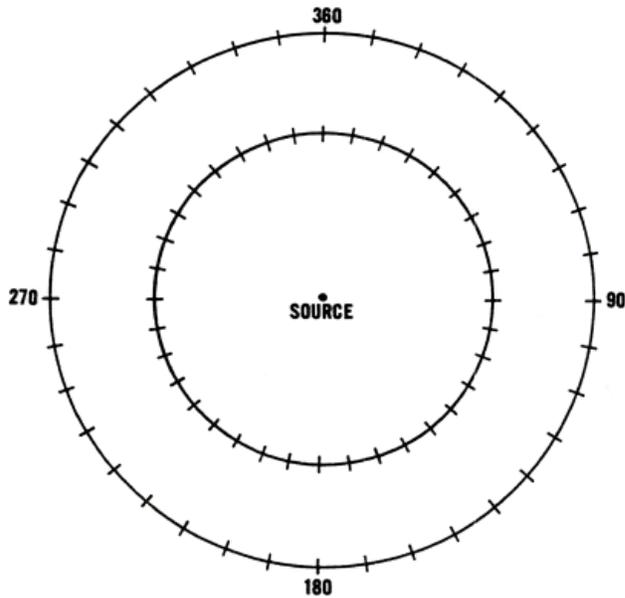


Attachment 6

WORST CASE TOXIC CORRIDOR WORKSHEET

10 Minute Mean Wind	
<div style="border: 1px solid black; padding: 5px; background-color: #ffff00; display: inline-block;">Wind Direction (°)</div> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>	<div style="border: 1px solid black; padding: 5px; background-color: #ffff00; display: inline-block;">Wind Speed (kt)</div> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>

Plotted Corridor		
<div style="border: 1px solid black; padding: 5px; background-color: #ffff00; display: inline-block;">Centerline (°)</div> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>	<div style="border: 1px solid black; padding: 5px; background-color: #ffff00; display: inline-block;">Length (ft)</div> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>	<div style="border: 1px solid black; padding: 5px; background-color: #ffff00; display: inline-block;">Width (circle one)</div> <div style="border: 1px solid black; padding: 5px;"> <p>Wind Speed</p> <p>≤ 3 kt: circle</p> <p>4-10 kt: 45° each side</p> <p>≥ 11 kt: 22.5° each side</p> </div>
<p>Add 180° to wind direction. If greater than 360°, subtract 360° from the sum.</p>	<p>$l = 6076 \times \text{wind speed}$ (kt)</p>	



Plotting Instructions

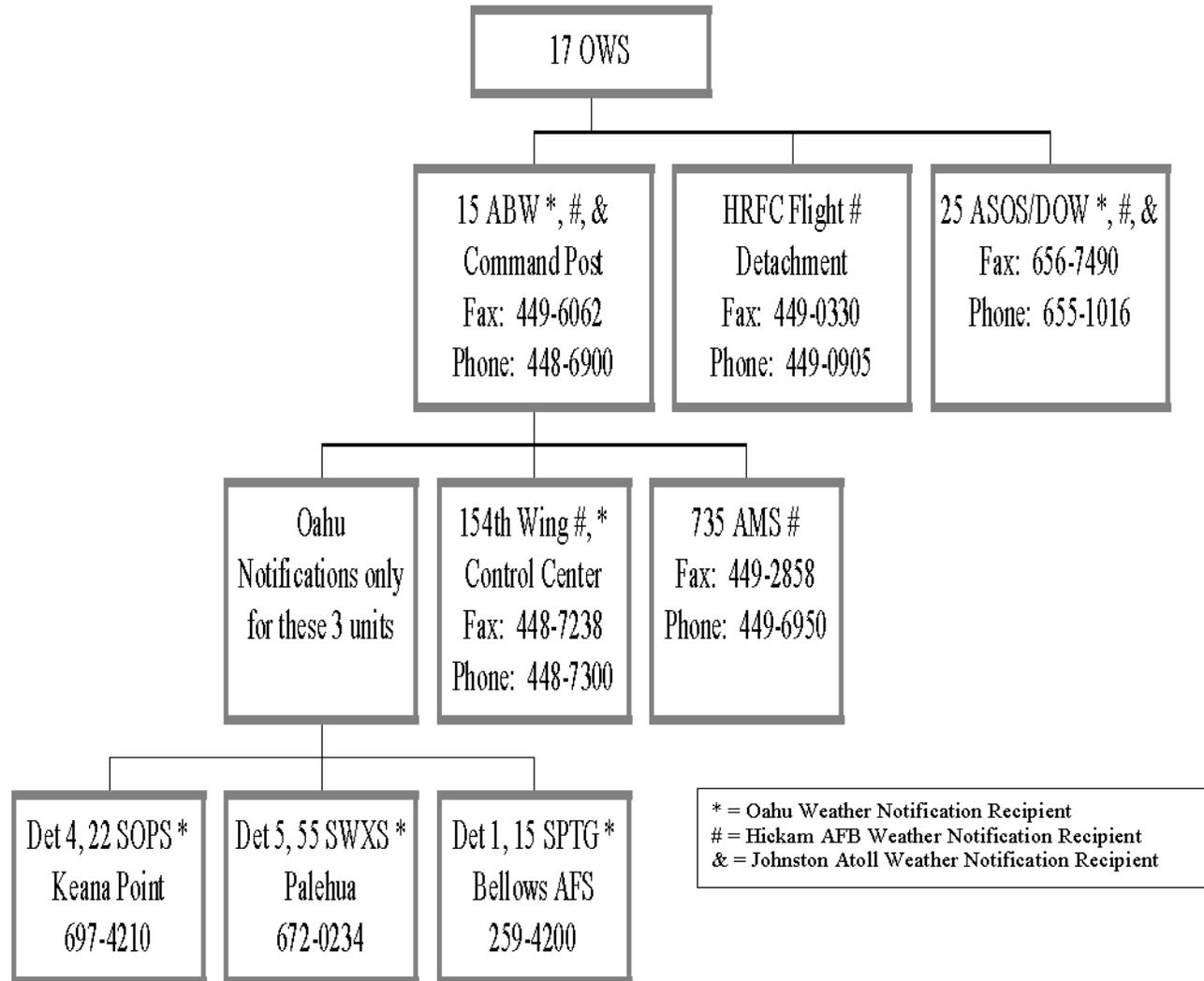
1. *Centerline:* Draw a line from the source along the radial toward which the wind is blowing.
2. *Corridor:* If wind speed ≤ 3 kt, draw a circle around the source.

If wind speed ≥ 4 kt, draw the corridor along centerline. Each hash mark is equivalent to 10°.
3. Make 2 copies of this completed worksheet.

17 OWS:	449-8332
	449-8335
Fax:	449-8336

Attachment 7

HICKAM METWATCH DISSEMINATION PYRAMID



EXAMPLE WEB VIEW OF 17 OWS WEATHER WARNINGS, WATCHES AND ADVISORIES.

The screenshot shows a Microsoft Internet Explorer window titled "17 OWS Weather Warnings, Watches, and Advisories". The page content is organized into four sections, each with a title and an empty table with the following columns: Type, Number, Event, Start Time, and End Time.

Hickam AFB Weather Warnings, Watches, and Advisories				
Type	Number	Event	Start Time	End Time

Wheeler AAF Weather Warnings, Watches, and Advisories				
Type	Number	Event	Start Time	End Time

Oahu Weather Watches and Warnings				
Type	Number	Event	Start Time	End Time

Johnston Atoll Weather Warnings				
Type	Number	Event	Start Time	End Time

Attachment 9

WEATHER SUPPORT AREAS OF RESPONSIBILITY (17 OWS IS SHADED)

